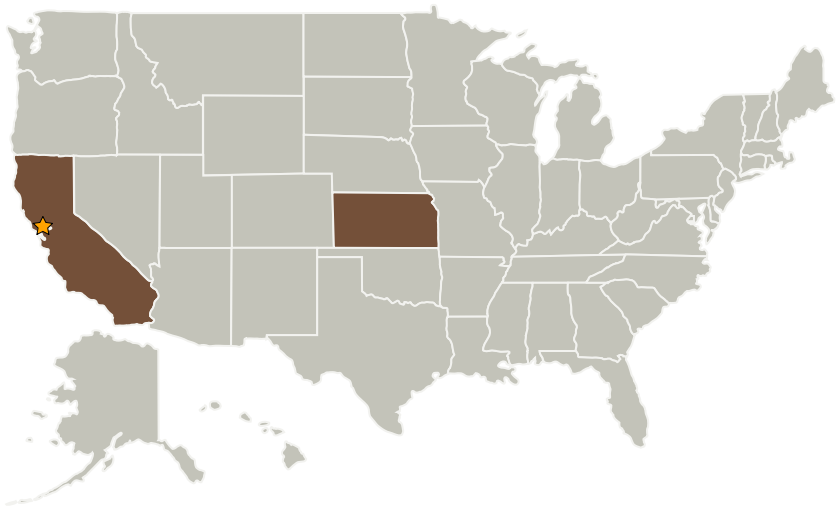
Reusable In Situ AirCore System for CO2 and Trace Gas Measurements, Phase I

Completed Technology Project (2009 - 2009)

Project Introduction

A novel design for an in situ atmospheric sensor for CO2 and trace gases is proposed. The sensor, named AirCore, provides the advantages of existing in situ sensors (e.g. high resolution) but eliminates possible biases in analysis that often originate from imperfect measurement condition. The AirCore provides a significant savings in cost and weight while increasing the capabilities of existing in situ sensors. The AirCore system consists of the AirCore gas sampler and the support system to accomplish its high altitude (nominally 70,000 ft.) mission. This support system includes the sensor launch and recovery components. The AirCore can be launched and recovered by a crew of two which reduces the operational cost of the system.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Jacobs Engineering Group, Inc.	Supporting Organization	Industry	Dallas, Texas

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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California	Kansas

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
  - TX16.5 Range Tracking, Surveillance, and Flight Safety Technologies